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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/838,886	04/20/2001	Wolfgang Bachmann	943-001.5	1653

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EXAMINER

HARVEY, DIONNE

ART UNIT. PAPER NUMBER

2643

DATE MAILED: 03/13/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/838,886

Applicant(s)

Bachmann

Examiner

Dionne Harvey

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8, 15, and 17-22 is/are rejected.
- 7) ☒ Claim(s) 9-14 and 16 is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☐ All b) ☐ Some\* c) ☐ None of:

- ☐ Certified copies of the priority documents have been received.
- ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_
- ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\*See the attached detailed Office action for a list of the certified copies not received.

- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

a) ☐ The translation of the foreign language provisional application has been received.

- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_
- ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

*R. B. Barmie*  
REXFORD BARNIE  
PRIMARY EXAMINER

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## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the “spatially different distribution of elasto-mechanical properties” of claim 4, must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### ***Claim Rejections - 35 U.S.C. § 112***

2. Claim 4 is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The claim recites “spatially different distribution of elasto-mechanical properties”. There is no support for this limitation In the specification.

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***Claim Rejections - 35 U.S.C. § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-6, 17-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Azima (US 6,327,369).

Claim 1, Azima '369 teaches a tweeter comprising a light weight, freely carried thin sandwiched plate(2) which can be excited into multiple reflected bending waves; and at least one driver (T) wherein the driver is designed to excite at higher frequencies and the sandwich plate is designed for propagation of bending waves at low damping; the sandwich plate is freely supported by holding elements (3,17) with low damping. Azima does not specifically teach that the holding elements are designed to be low damping at higher sound frequencies. However, The Examiner takes Official Notice that damping in the form of a panel suspension or a weighted mass, which will decouple from the panel at a higher frequency, are well known in the art and would have been obvious so that the damping member does not attenuate the bending waves of the panel. See cited references, below.

Claim 2, Azima teaches that the sandwich plate has two cover plates(21) and a core layer(22).

Claim 3, Azima teaches a honeycomb structure.

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Claims 4,5 and 22, in column 3, lines 43-50, as best understood with regard to the U.S.C. 112 first paragraph rejection above, Azima teaches spatially different distribution of elasto-mechanical properties and zonal thinning and/or cut-outs.

Claim 6, in figure 3 shown transducer which vary in size. column 3, lines 43-44, teaches that cut-out for locating the transducer. It therefore appears that Azima teaches that the cut-outs/zones may be repeated (for transducer 1 and 2 as depicted) in a reduced scale (driver T is smaller than driver 9).

Claim 17, Azima teaches that the holding element (3) may be inserted within a larger support structure (1).

Claim 18, Azima teaches that one side of the holding structure(3) is attached via adhesive to the sandwich plate(2) and the other side is attached to the support structure(1).

Claim 19, Azima teaches that the edge of the holding element(3) is cemented via adhesive to a cut-out of the surrounding support structure(1), as broadly claimed.

Claim 20, In figure 1, It appears that Azima teaches that the back side of the driver is a holding element (see 28).

Claim 21, in figure 3, Azima teaches that the plate diaphragm(6) is designed as a support structure for element (2).

4. Claims 7,15 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Azima (US 6,327,369) in view of Sakamoto (US 4,300,655) or Watters (US 3,347,335).

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Claims 7 and 15, Azima does not specifically teach that the core includes a foil which periodically contains bulges produced by embossing. In figure 8 of Sakamoto, it is shown that the core (6,7) includes bulges as claimed by the Applicant. Figure 9 of Watters, also illustrates a core having bulges at it periphery, as broadly claimed. Neither reference teaches that the coil includes a foil. However, it is well known in the art that the core of the sandwich-like panel may be constructed of a rigid plastic foam cellular matrix or honeycomb matrix of metal foil, plastic etc. See cited references below. Therefore, it would have been obvious for one of ordinary skill in the art at the time of the invention to combine the teachings of Azima and Sakamoto OR Waters, providing a foil core having "bulges" wherein the core permits the transmission of bending wave energy.

*Allowable Subject Matter*

5. Claims 9 and 19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claims 10-14 are objected to due to dependency upon claim 9.

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*Conclusion*

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Azima US 6,151,402 teaches materials from which core may be constructed.

Azima US 6,442,282 teaches low dampig at higher frequencies.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statements for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dionne Harvey whose telephone number is (703) 305-1111. The examiner can normally be reaches on Monday through Friday from 8:30am to 6:00pm.

**Any responses to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, DC 20231

**or faxed to:**

(703) 308-6306, for formal communications for entry

**Or:**

(703) 308-6296, for informal or draft communications, please label "PROPOSED" or "DRAFT".

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Hand delivered responses should be brought to Crystal Park II, 2121 Crystal Drive,  
Arlington, VA., Sixth Floor(Receptionist)

If attempts to reach the examiner by telephone are unsuccessful, the examiner's  
supervisor, Curtis Kuntz, can be reached at (703) 305-4708.

Any inquiry concerning this communication or earlier communications from the  
examiner should be directed to Dionne Harvey whose telephone number is (703) 305-1111.

D.H.

March 10, 2003

*R. Pamie*  
**REXFORD BARNIE**  
**PRIMARY EXAMINER**